



Atty.
Dkt. No.

M#

Client Ref.

310701

P-1943.063-US

**INFORMATION DISCLOSURE STATEMENT
BY APPLICANT**

Applicant: HOFFMAN et al.

Appln. No.: 10/759,699

Filing Date: January 19, 2004

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Examiner: M. HASAN

Group Art Unit: 2873

U.S. PATENT DOCUMENTS

Examiner's Initials*		Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
M.H	AR	5,410,375	04/1995	Fiala	351	168	
	BR	6,366,404	04/2002	Hiraiwa et al.	359	494	
	CR	6,411,384	06/2002	Sakuma et al.	356	365	
	DR	6,417,974	07/2002	Schuster	359	754	
	ER	6,583,931	06/2003	Hiraiwa et al.	359	497	
	FR	6,672,109	01/2004	Hiraiwa	65	378	
	GR	6,683,729	01/2004	Schuster	359	656	
	HR	6,697,199	02/2004	Gerhard et al.	359	499	
	IR	6,728,043	04/2004	Gruner et al.	359	637	
	JR	6,775,063	08/2004	Shiraishi	359	499	
	KR	2002/0085176	07/2002	Hiraiwa et al.	353	20	
	LR	2002/0149855	10/2002	Schuster	359	649	
	MR	2002/0186355	12/2002	Omura	355	53	
	NR	2003/0000453	01/2003	Unno et al.	117	1	
	OR	2003/0007253	01/2003	Schuster et al.	359	642	
	PR	2003/0012724	01/2003	Burnett et al.	423	464	
✓	QR	2003/0063393	04/2003	Omura	359	649	

FOREIGN PATENT DOCUMENTS

ORIGINAL DOCUMENTS							Abstract		Readily Available	
		Document Number	Date MM/YYYY	Country	Inventor Name		Enclosed	No	Enclose	No
M.H	RR	DE 101 23 725	11/2002	Germany	Wagner et al.				X	
	SR	DE 101 23 727	11/2002	Germany	Brunotte et al.				X	
	TR	DE 101 25 487	01/2003	Germany	Brunotte et al.				X	
	UR	DE 101 27 320	12/2002	Germany	Brunotte et al.		X			
	VR	DE 102 10 782	10/2003	Germany	Krähmer et al.		X			
	WR	2002-302628	10/2002	Japan	Mitsuhiko et al.		X			
✓	XR	2003-050349	02/2003	Japan	Naomasa et al.		X			
	YR									
	ZR									
	AAR									

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

BBR

Examiner

M. Hasan

Date Considered:

3/14/05

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FORM PTO-1449 (modified)
To: U.S. Department of Commerce
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Examiner's Initials*	Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
M.H	CCR2003/0086157	05/2003	McGuire, Jr.	359	352	
	DDR2003/0086171	05/2003	McGuire	359	499	
	EER2003/0089299	05/2003	Obara et al.	117	2	
	FFR2003/0091934	05/2003	Allan et al.	430	311	
	GGR2003/0112501	06/2003	Sakuma	359	355	
	HHR2003/0128349	07/2003	Unno	355	67	
	IIR2003/0147061	08/2003	Omura	355	67	
	JJR2003/0197946	10/2003	Omura	359	649	
	KKR2003/0234981	12/2003	Hoffman et al.	359	494	
	LLR2004/0001244	01/2004	Hoffman et al.	359	256	
	MMR2004/0004757	01/2004	Schuster	359	365	
	NNR2004/0004771	01/2004	Omura	359	649	
	OOR2004/0005266	01/2004	Sakuma et al.	423	328.2	
	PPR2004/0036961	02/2004	McGuire, Jr.	359	344	
	QQR2004/0036971	02/2004	McGuire, Jr.	359	499	
	RRR2004/0036985	02/2004	McGuire, Jr.	359	754	
	SSR2004/0105170	06/2004	Krahmer et al.	359	726	
✓	TTR2004/0136084	07/2004	Unno	359	649	

FOREIGN PATENT DOCUMENTS

	Document Number	Date MM/YYYY	Country	Inventor Name	English Abstract		Translation Readily Available	
					Enclosed	No	Enclose	No
M.H	UURWO 01/01182	01/2001	WIPO	Meda et al.				
	VVRWO 02/093257	11/2002	WIPO	Brunotte et al.	X			
	WWWO 03/003429	01/2003	WIPO	Omura et al.	X			
	XXRWO 03/007046	01/2003	WIPO	Yamaguchi	X			
	YYRWO 03/046634	06/2003	WIPO	Omura et al.	X			
	ZZRWO 03/077011	09/2003	WIPO	Fiolka et al.				
	AAAWO 03/077007	09/2003	WIPO	Goehnermeier et al.	X			
	BBBWO 03/088330	10/2003	WIPO	Yamaguchi	X			
✓	CCCWO 04/008254	01/2004	WIPO	Yamada				
	DDD							

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

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FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS							Abstract		Readily Available	
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	BR									

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

NY	CR	Burnett et al., "Intrinsic Birefringence in 157 nm Materials," <i>National Institute of Standards and Technology, SEMATECH Calcium Fluoride Birefringence Workshop, July 18, 2001, Slides.</i>				
	DR	Burnett et al., "Intrinsic Birefringence in Calcium Fluoride and Barium Fluoride," <i>Rapid Communications, Physical Review B, Vol. 64, November 29, 2001, pp. 241102-1 - 4.</i>				
	ER	Burnett et al., "Intrinsic Birefringence in 157 nm Materials," <i>National Institute of Standards and Technology, Slides.</i>				
	FR	Chiba et al., "New Generation Projection Optics for ArF Lithography," <i>Optical Microlithography XV, Proceedings of SPIE, Vol. 4691, 2002, pp. 679-686.</i>				
	GR	Matsumoto et al., "Analysis of Imaging Performance Degradation," <i>Optical Microlithography XVI, Proceedings of SPIE, Vol. 5040, 2003, pp. 131-138.</i>				
	HR	Matsuyama et al., "High NA and Low Residual Aberration Projection Lens for DUV Scanner," <i>Optical Microlithography XV, Proceedings of SPIE, Vol. 4691, 2002, pp. 687-695.</i>				
	IR	Matsuyama et al., "Microlithographic Lens for DUV Scanner," <i>International Optical Design Conference 2002, Proceedings of SPIE, Vol. 4832, 2002, pp. 170-174.</i>				
	JR	Matsuyama et al., "Nikon Projection Lens Update," <i>Nikon Corporation, SPIE Microlithography 5377-65, February 27, 2004, Slides 1-25.</i>				
	KR	Matsuyama et al., "Nikon Projection Lens Update," <i>Precision Equipment Company, Nikon Corporation.</i>				
	LR	Miyawaki et al., "Development of 157nm Exposure Tools," <i>Canon, 157nm Technical Data Review, December 11-13, 2001, Slides 1-22.</i>				
	MR	Nakano et al., "The Development of 193nm-Immersion Exposure Tools," <i>Canon, International Symposium on Immersion & 157nm Lithography, August 3, 2004, Slides 1-25.</i>				
	NR	Nattermann et al., "Birefringence of CaF_2 ," <i>Schott Lithotec, July 23, 2001, Slides.</i>				
	OR	Nogawa, "Development Status of 157nm Exposure Tools," <i>Canon Inc., Semiconductor Production Equipment Development Center, Slides 1-26.</i>				
✓	PR	Nogawa et al., "System Design of a 157nm Scanner," <i>Canon Inc.</i>				

Examiner clj/usa Date Considered: 7/14/05

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QR						

FOREIGN PATENT DOCUMENTS

Document Number	Date MM/YYYY	Country	Inventor Name	English Abstract	Translation Readily Available
RR				Enclosed	No

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

M-H	SR	Unno et al., "Analyses of Imaging Performance Degradation Caused by Birefringence Residual in Lens Materials," <i>Optical Microlithography XIV</i> , Proceedings of SPIE, Vol. 4346, 2001, pp. 1306-1317.			
	TR	Owa et al., "Nikon F2 Exposure Tool," <i>Nikon Corporation</i> , 157nm Data Review, December 2001, Slides 1-24.			
	UR	Owa et al., "Nikon F2 Exposure Tool," <i>Nikon Corporation</i> , 3 rd 157nm Symposium, September 4, 2002, Slides 1-25.			
	VR	Shiraishi et al., "Current Status of Nikon's Investigation on CaF ₂ Intrinsic Birefringence," <i>Nikon Corporation</i> , International SEMATECH Calcium Fluoride Birefringence Workshop, July 18, 2001, Slides 1-15.			
	WR	Shiraishi et al., "Progress of Nikon's F2 Exposure Tool Development," <i>Optical Microlithography XV</i> , Proceedings of SPIE, Vol. 4691, 2002, pp. 594-601.			
	XR	Shiraishi et al., "Current Status of F2 Exposure Tool Development," <i>Precision Company, Nikon Corporation</i> , NGL Workshop 2003, July 10, 2003, pp. P1-P29.			
	YR	Suzuki et al., "Influence of the Intrinsic Birefringence in F2 Projection System," <i>Canon Inc.</i> , Calcium Fluoride Birefringence Workshop, July 18, 2001, Slides.			
	ZR	Takahashi, "Current Status and Future Plan for 157nm Lithography," <i>Canon Inc.</i> , Litho Forum Los Angeles, International SEMATECH, January 27-29, 2004, Slides.			
	AAR	Tirri et al., "Intrinsic Birefringence Impact on the ASML Wilton 157nm Lens," <i>ASML</i> , Wilton, Connecticut, Intrinsic Biref Sematech, July 17, 2001, Slides 1-15.			
	BBR	Van Peski, "Lens Design Software CODE V® Modification," <i>International SeMaTech</i> , July 18, 2001, Slides.			
	CCR	Walker, "Simulation of Intrinsic Birefringence of CaF ₂ in Code V®," <i>Optical Research Associates</i> , SEMATECH Calcium Fluoride Birefringence Workshop, July 18, 2001, Slides.			
	DDR	Wang, "157 nm Birefringence Measurement System Using PEM Technology," <i>Hinds Instruments</i> , Slides.			
✓	EER	Ware, "Pushing ArF to the Limits!," <i>Canon USA</i> , DNS Lithography Breakfast Forum at SEMICON West 2003, July 2003, Slides.			

Examiner

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GGR				Enclosed No	Enclose No

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

M.A.	HHR	Webb, Intrinsic Birefringence Workshop, <i>Coming</i> , Coming Tropel, July 18, 2001, Slides.			
	IIR	Zeiss et al., "Intrinsic Birefringence in CaF ₂ ," <i>Zeiss</i> , CaF ₂ Birefringence Workshop, Slides.			
	JJR	"Business and Technology Update," <i>Canon Europa N.V.</i> , Amstelveen, Slides.			
	KKR	Memorandum from C. Van Peski to Exposure Tool Manufacturers and Lens Designers, Regarding Birefringence of Calcium Fluoride, May 7, 2001, XP-002218848.			
✓	LLR	Memorandum from C. Van Peski to PAG Members, Regarding Birefringence of Calcium Fluoride, May 7, 2001.			
	MMR				
	NNR				
	OOR				
	PPR				
	QQR				
	RRR				
	SSR				
	TTR				
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